

IN THE CLAIMS

Claims 4, 6, 7, 18-20, and 27-31 are pending in this application, wherein claims 8 and 21 are being canceled without prejudice or disclaimer, and wherein claims 27-31 are being amended to improve form, as follows:

- 1-3. (Canceled)
- 4. (Previously Presented) The storage device according to claim 27, wherein a storage capacity of said first storage section is at least 156 M bytes.
- 5. (Canceled).
- 6. (Previously Presented) The storage device according to claim 27, wherein said first storage section is a NAND flash memory.
- 7. (Previously Presented) The storage device according to claim 27, wherein said storage device is used as a storage medium of a car navigation system.
- 8-17. (Canceled).
- 18. (Previously Presented) The storage system according to claim 29, wherein said first storage unit and said second storage unit are provided in one chassis having a slot, and said second storage unit can be detached through said slot.
- 19. (Previously Presented) The storage system according to claim 29, wherein said first storage unit is configured with NAND flash memories.
- 20. (Previously Presented) The storage system according to claim 29, wherein said system is a car navigation system.
- 21-26. (Canceled).
- 27. (Currently Amended) A storage device, comprising:

a casing configured to be compatible with a hard disk drive;

a connector detachably connectable to a host in accordance with the ATA interface standard;

a control section disposed in said casing and configured to control inputting and outputting of data between the storage device and the host via said connector in accordance with the ATA interface standard;

a first storage section formed of flash memories disposed in said casing, connected to said control section, and configured to provide a first address space that is allocated with a lower portion of an address space allocated to the storage device as seen from said host, said first address space being arranged to store data of a system region for booting an operating system on the host, the data of the system region including a master boot record, a file management table, and an operating system; and

a second storage section formed of a hard disk drive disposed in said casing, connected to said control section, and configured to provide a second address space that is allocated with an upper portion of the address space allocated to the storage device, said second address space being arranged so as to store application data to be used by an application operating on the host, and

wherein the data of the system region is dublicately stored in both the first and second storage sections, and

wherein, upon booting of the host, said host reads data of the system region for booting the operating system from said first address space in said first storage section formed of flash memories and executes the read data to boot the operating system on the host.

28. (Currently Amended) A storage device, comprising:

a casing configured to be compatible with a hard disk drive;

a connector detachably connectable to a host in accordance with the ATA interface standard;

a control unit disposed in said casing and configured to control inputting and outputting of data between the storage device and the host via said connector in accordance with the ATA interface standard;

a first storage unit formed of NAND flash memories disposed in said casing and connected to said control unit~~storage section~~, said first storage unit being

configured to provide a first address space that is allocated with a lower portion of an address space allocated to the storage device as a master drive and arranged to store data of a system region for booting an operating system on the host, the data of the system region including a master boot record, a file management table, and an operating system; and

a second storage unit formed of a hard disk drive disposed in said casing and connected to said control ~~unit~~section, said second storage unit being configured to provide a second address space that is allocated with an upper portion of the address space allocated to the storage device as a slave drive and arranged to store application data to be used by an application operating on the host, and

wherein the data of the system region is duplicately stored in both the first and second storage units, and

wherein, upon booting of the host, said host reads data of the system region for booting the operating system from said first address space allocated to the first storage unit formed of NAND flash memories and executes the read data to boot the operating system on the host.

29. (Currently Amended) A storage system implemented in a computer system having an ATA controller, said storage system comprising:

a casing;

an interface control section provided for connecting the casing to said ATA controller;

a first storage unit formed of flash memories disposed in said casing and connected to said interface control section, said first storage unit being configured to provide a first address space that is allocated with a lower portion of an address space allocated to the storage device as a master drive and arranged to store data of a system region for booting an operating system on said computer system, the data of the system region including a master boot record, a file management table, and an operating system; and

a second storage unit formed of a hard disk drive disposed in said casing and connected to said interface control section, said second storage unit being configured to provide a second address space that is allocated with an upper portion of the address space allocated to the storage device as seen from said host, said second

address space being arranged as a slave drive and arranged to store application data to be used by an application operating on said computer system, and

wherein the data of the system region is duplicately stored in both the first and second storage units, and

wherein, upon booting of the computer system, said computer system reads, under control of said ATA controller, data of the system region for booting the operating system from said first address space allocated to said first storage unit formed of flash memories and executes the read data to boot the operating system on the computer system.

30. (Currently Amended) A storage device for installation in a computer system having an ATA controller, said storage system comprising:

a casing configured to be compatible with a hard disk drive;

a control unit disposed in said casing and configured to control inputting and outputting of data between the storage device and a host of the computer system under control of said ATA controller;

a first storage unit formed of flash memories disposed in said casing, said first storage unit being connected to said control unit, configured to provide a first address space which is allocated with a lower portion of an address space allocated to the storage device, and arranged to store data of a system region for booting an operating system on the host, the data of the system region including a master boot record, a file management table, and an operating system;

a second storage unit formed of a hard disk drive disposed in said casing, said second storage unit being connected to said control unit, configured to provide a second address space which is allocated with an upper portion of the address space allocated to the storage device as a slave drive, and arranged to store application data to be used by an application operating on the host; and

a power source monitoring circuit provided with a condenser, and

wherein the data of the system region is duplicately stored in both the first and second storage units, and

wherein, upon booting of the host, said host reads, under control of said ATA controller, data of the system region for booting the operating system from said first

storage unit formed of flash memories and executes the read data to boot the operating system on the host, and

wherein, upon a sudden power-off being detected, said source power source monitoring circuit maintains a power source voltage for a predetermined time by using an electric charge accumulated in the condenser, and the control unit operates to store file management data temporarily retained at such sudden power-off into the first storage unit formed of flash memories under the power source voltage maintained by the electric charge accumulated in the condenser.[[.]]

31. (Currently Amended) A computer system comprising:

a host having an ATA controller; and

a storage device detachably connected to the host by way of said ATA controller;

said storage device being allocated with an address space as seen from said host, and comprising:

a casing;

a control unit disposed in the casing and detachably connected to said ATA controller;

a first storage unit formed of flash memories disposed in the casing and connected to said control unit, said first storage unit being configured to provide a first address space allocated with a lower portion of said address space and arranged to store data of a system region for booting an operating system on said host, the data of the system region including a master boot record, a file management table, and an operating system; and

a second storage unit formed of a hard disk drive disposed in the casing and connected to said control unit, said second storage unit being configured to provide a second address space allocated with an upper portion of said address space and arranged to store application data to be used by an application operating on under control way of said ATA controller and said control unit, data of the system region for booting the operating system from said first address space allocated to the first storage unit formed of flash memories and executes the read data to boot the operating system on the host,

wherein the data of the system region is duplicately stored in both the first and second storage unit, and

wherein, upon booting of the computer system, said host reads, by way of said ATA controller and said control unit, data of the system region for booting the operating system from said first address space allocated to the first storage unit formed of flash memories and executes the read data to boot the operating system on the host.